



## **EARLY INTERVENTION: ITS IMPORTANCE AND BENEFITS**

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### **Abstract:**

The number of young children with developmental disabilities seems to be escalating in Singapore. This is accompanied by a corresponding increase in the number of early intervention centers to cater to the learning and educational needs of these children with special educational needs. Early intervention is crucial in the early years of a child's developmental stages as it can minimize the effects of young children who are at-risk or diagnosed with developmental disabilities, thereby enhancing the potential for independence in adulthood. While there has been an abundance of published studies in early intervention, most of them are done in the Western and European countries. Research in early intervention for young children with special educational needs is scarce in Singapore. With the increased prevalence and awareness of young children with special needs, attention is very much warranted in early intervention. Hence, this paper provides an overview of early intervention, its service delivery models, importance, and finally the benefits so that parents whose child with special needs can gain a better understanding of early intervention.

**Keywords:** early intervention, young children, special needs, importance, benefits

### **Introduction**

One of the most pressing problems among educators and parents in Singapore is the escalating number of children with developmental disorders such as autism spectrum

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disorder, global developmental delay, cerebral palsy, speech and language delay, and others. After a formal diagnosis from the child psychologists in local hospitals, parents are recommended to enrol their children with developmental disabilities in early intervention centres (EIC) to receive therapy and educational services. The programme is known as Early Intervention Programme for Infants and Children (EIPIC). However, the waiting list for admission in EIPIC is long due to the increased prevalence of children with developmental disorders and the limited EIC in Singapore which are usually operated by Voluntary Welfare Organizations (VWOs). A VWO is a non-profit organisation which provides social welfare services that caters to children and adults with learning disabilities. In Singapore, there are 10 VWOs which run 17 EIPIC centres in Singapore currently (<https://www.ncss.gov.sg/Career/EIPIC.asp>).

Over the years, the Singapore government has provided more places in EIPIC and it has expanded its capacity by 40%, from 1350 EIPIC places in 2006 to 1900 in October 2011. With this expansion, the number of EIPIC centres also increased from nine in 2006 to 17 in 2015. With more children being diagnosed with developmental disabilities, the government has also set up another seven new EIPIC centres within the next few years to meet the projected demand for 2700 places (Ministry of Social and Family Development, 2015).

Most parents, while not all, have not have heard of EIPIC centre before and may wonder what types of service does it provide. Some may think that EIC provides a national curriculum like mainstream schools or just a therapy centre to address the needs of children with developmental disabilities. To provide a clearer picture, the intent of this paper is to provide an overview of early intervention, its service delivery models, importance, and finally the benefits of early intervention in Singapore. With these objectives, the authors of this paper hope that parents can gain a better understanding, the importance and its benefits of early intervention so that they are able to make informed decision when considering to enrol their child into early intervention centres.

### **What is Early Intervention?**

The term “intervention” comes from the verb *intervene* which means to intentionally become involved in a situation (often problematic and/or difficult) so as to improve or prevent it from getting worse. Hence, early intervention simple means to intervene in the shortest possible time to resolve problems that have already occurred before becoming serious. In early intervention, the word “early” refers to the chronological age of the child. In this paper, for the ease of discussion, the abbreviation EI is used to denote *Early Intervention*.

Many researchers in the field have not come to an agreement on the definition of EI. According to Ramey and Ramey (1998), EI is a term that refers to a broad spectrum of activities that are designed to enhance a child's development, usually from birth to age six and it usually commences with a comprehensive screening of the child's and the family's strengths, challenges, and needs. The early years of a child's life are recognized as being crucial to the development of various skills such as motor (gross motor and fine motor), adaptive (dressing and undressing, and feeding), cognitive, communication, and social.

Children who are Singaporean citizen or permanent resident with age of 6 years and below are eligible to apply for admission into EIPIC. They have to be recommended for EIPIC by a psychologist from any local hospitals with a diagnosis of developmental, intellectual, sensory (visual or hearing impairment), or physical disabilities, or a combination of disabilities. In Singapore, there are several government-funded EIPIC centres such as Society of Moral Charities, Rainbow Centre, Autism Association of Singapore, Autism Resource Centre, AWWA Early Years Centre, SPD, Cerebral Palsy Alliance Singapore, and Fei Yue Community Services. The ultimate objectives of EI for young children with developmental disabilities are to maximize the child's ability to (1) be included into the community, (2) live independently in the community, (3) be gainfully employed, and (4) lead a better quality of life.

Parents must be aware that EI is different from early childhood education as EI focusses on individually planned educational programs and specialized teaching approaches that caters to the learning needs of the children with parental involvement. Hence, the main objective of EI is its focus on early developmental skills that are precursors for current and later school success (Odom & Wolery, 2003). Families, especially caregivers, play an important role as they are the primary nurturing contexts for their own children with learning disabilities (Odom & Wolery, 2003).

### **An Enabling Agency in Singapore**

Known as SG Enable, it is an agency in Singapore that provides different types of assistance for enabling persons with disabilities. SG Enable is set up with the intention to supply information and referral services for children and adults with special needs. Apart from this, SG Enable has many other functions. Firstly, it provides grants and support to both the caregivers and individuals with special needs. Secondly, it deals with transition management for people with special needs as they move through the different life stages. In addition, the organisation helps to enhance employability and employment choices for individuals with special needs.

Another area which SG Enable focuses is the provision of services to children with special needs from ages 0 to 6 years old. Specifically, it has early intervention programs for infants and children and an inclusive child care program for children with mild disabilities. Apart from these two, SG Enable also has short term support programs that help to prepare children with mild developmental needs transit smoothly to the mainstream primary school education. If any of the children are in need of therapy services, the organization can provide a list of VWOs that provide rehabilitation and therapy services for children with special needs. For children with severe disabilities, SG Enable also provide Children Disability Homes for both long-term residential care and short-term respite care (e.g., Chen Su Lan Methodist Children's Home, Thye Hua Kwan Moral Charities Limited, Singapore Red Cross Society, etc.) whose caregivers are incapable to care for them or to provide temporary care.

The SG Enable is also proactive in helping low income families of children with special needs by having special schemes that provide financial assistance as well as funds to harness assistive technologies to help individuals with disabilities to live independently.

### **Early Intervention Service Models**

Most EIPIC centres provide centre-based intervention where a team of professionals (teacher, occupational therapist, physiotherapist, psychologist, speech & language therapist and social worker) provides intervention as well as family support that tailor to the needs of each child and his family. Before admission into the EI program, the process will usually start with the following:

- Initial screening;
- Child's observation by team members (usually 8-10 weeks from date of admission);
- Formulation of child's Individualized Education Plan (in consultation with caregivers and usually reviewed every six months);
- Classroom intervention;
- Case conference (parent-teacher conference), usually twice a year.

Teaching is conducted by trained early intervention teachers in classroom setting with small group size. Depending on each centre, children may receive intervention either twice or thrice weekly with two and/or three hours per session. A period of about eight to ten weeks of child observation by the team members (teachers and therapists) is required before developing an Individualized Education Plan (IEP). An IEP is a written document of learning goals and objectives for the child through a team effort (teachers,

therapists, and parents). It is usually reviewed twice a year during a case conference with a review report of the child's current progress in the classroom. Caregiver involvement is strongly encouraged during the intervention period where parents are invited into the classroom to observe how their child is learning. During classroom observation, teachers will then share some intervention strategies where parents can continue to work with their child at home. This is important as the skills learnt in classroom setting can be generalized across other people and settings. Depending on the profile of each child, teachers and therapists will work on any of the six developmental domains: (1) gross motor, (2) fine motor, (3) cognitive, (4) communication, (5) social, and (6) self-help skills. However, intervention will be focussed on the specific learning needs of the child depending on the family priorities.

Most of the EIPIC centre in Singapore adopted the family-centred approach where caregivers are active partners in their child's learning outcomes. Caregivers' involvement is crucial in a child's life during early intervention. According to Epstein (2011), the term *parent engagement* is used to denote a collaborative partnership between teaching staffs and parents where all parties take ownership and accountability so as to help the child to achieve his learning needs. Epstein (2011) suggested six areas that schools can engaged parents with their child:

1. Provision of parenting support;
2. Communication with parents;
3. Provision of volunteer opportunities;
4. Support learning at home;
5. Encourage decision making;
6. Collaboration with the community.

Some of the EIPIC centers in Singapore offer parents training programmes where workshops are conducted by allied health professionals. For example, speech and language therapists may teach caregivers how to communicate with children who are non-verbal using Picture Exchange Communication System and occupational therapists to share on working improving writing skills for children with weak fine motor skills. For some centers, workshops such as transitional planning programmes were offered to parents to share the educational pathway of children with developmental disabilities who have reach the age of six. This post-EIPIC service is important to help parents to ensure a seamless transition from EIPIC to the next phase of life for their children. Pertinent information such as places to go for psychological assessment for school placement, choice, programmes and services of various special education schools, mainstream school curriculum, and application for special education schools are provided to parents so that they can make informed decision for their children. A study conducted to examine the effectiveness of training programs for parents of children

with problem behaviours by Kaminski, Valle, Filene, and Boyle (2008) found that parents were more involved in their children's social interaction, cognitive, and academic skills. Another study by McConachie and Diggle (2006) found that parent implemented intervention programs for children with autism is effective as children demonstrated improvement in communication skills, behaviours, and better parent-child interactions. A recent paper by Chua (2015) proposed using a triple-E framework of *Enablement*, *Engagement*, and *Empowerment* in the early intervention setting where a family-centred practice model based on the family's needs, priorities and available resources are considered when planning the learning outcomes for their children. With this proposed framework, there will also be collaborative partnership among parents, professionals and the child.

### **Importance and Benefits of Early Intervention**

Early intervention is crucial to children who are suspected or are at-risk of having developmental delays or any other learning challenges as research shows that children's earliest experiences play a very critical role in brain development. The importance in early intervention has an impact in the neural circuits of the brain in children as they are the most flexible during the first three years of life (Ramey & Ramey, 1998). The neural circuits create the early foundational learning, behaviour, and health of any children during this critical window period.

Research has shown that early social emotional development provides the foundation in which cognitive and language skills develop during the early years of a child (Bailey, et al., 2006; Odom & Wolery, 2003; Ramey & Ramey, 1998). For example, children with autism spectrum disorder who are non-verbal and begin early intervention in their early preschool years were more likely to become verbal as compared to children who begin intervention after 5 years old (Koegel, 2000). This finding of beginning intervention early is further supported by other researchers (Landa, 2007; Reichow, 2012; Rogers, 1996). Parents need to be aware that EI is different from early childhood education as its focus is on family-centred services. EI focusses on individually planned educational programs and specialized teaching approaches that cater to the needs of the children with the partnership from parents.

While the aim of EI is its focus on early developmental skills that are precursors for current and later school success (Odom & Wolery, 2003), it can also help to minimise the effects of the disabilities or risk and maximise the child's development. In this way, it helps to enhance the child's potential for independence in adulthood (Bailey, et al., 2006; National Research Council, 2001). According to Ramey and Ramey (1998), there were improvement in children's learning outcomes when the early intervention

programs are intensive and systematic with parents being the active partners in their children's developmental progress. Finally, when intervention starts early rather than late, it is likely to be more effective in the child's learning outcomes and also less costly in the long run (Bailey, et al., 2006; National Research Council, 2001; Ramey & Ramey, 1998).

There is no one-size-fits-all approach in early intervention. Every child is different in their profiles and learning journeys. There are many factors that can affect the learning outcomes of a child. One of the factors that adversely affects the learning outcome of the child with developmental disability is the risk factors. Risk factors are factors in the environment or that are specific to an individual which predispose some children to, or are associated with, particular physical, social or psychological problems. Such factors, when detected early, can be eliminated or reduced in terms of their potential impact by early intervention. Risk factors can be classified under the child and the family (see Table 1) for more information.

**Table 1: Risk Factors of the Child and the Family**

Child	Family
Specific learning difficulties	Socio-economic status
Communication difficulties	Parental conflict
Specific developmental delay	Family breakdown (single-parent)
Genetic disorder	Inconsistent or unclear discipline
Physical disabilities	Hostile or rejecting relationships
Emotional behavioral problem	Failure to adapt to a child's changing needs
Low self-esteem	Abuse (Physical, sexual or emotional)
	Neglect
	Parental psychiatric illness
	Death and loss – including loss of friendship

## Conclusion

This paper provides an overview to parents of children with special needs in Singapore on the nature, importance and benefits of early intervention. Over the years, there is sufficient research evidence to indicate that early intervention helps to lessen the effects of the disability and that an early start to intervention will avoid further impairment to the child's developmental milestone. In addition, studies have also shown that early intervention is effective with benefits such as improved learning outcomes of the child with developmental disability, preventions of symptoms of the disability, cost savings, and reduction of parenting stress. When parents have an understanding on the nature, importance and benefits of early intervention, only then they can make informed

decision when considering to enrol their child for early intervention. Parents must be aware that EI is different from preschool mainstream education as intervention focusses on individualised planned educational programs and specialized teaching approaches/strategies that caters to the specific learning needs of the children.

Finally, it must be noted that any improved learning outcome of a child with developmental disability must come from various stakeholders. This not only include the teaching staffs who work closely with the child, more so are the parents. Parents are viewed as crucial members of the entire early intervention process. They have to work collaboratively with the team members in the EIPIC center (early interventionists and allied health professionals) who are working closely with the child.

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